

Emotional Intelligence and Quality of Nursing Care: A Need for Continuous Professional Development

Abstract

Background: Emotional Intelligence (EI) is necessary for personal and professional success. This study aimed to determine the relationship between EI and quality of nursing care from the viewpoint of nurses and patients. **Materials and Methods:** This descriptive correlational study was conducted using convenience sampling to select the patients ($n = 300$) and census sampling to select the nurses ($n = 100$) at Amir Alam Hospital in Tabriz, Iran, in 2018. The data collection tools were the Quality Patient Care Scale (QUALPAC) and EI test by Bradberry-Greaves. Data analysis was performed in SPSS Version 20, using t-test, ANOVA, Chi-square, Pearson's correlation test, and multivariate analysis. **Results:** The mean (SD) score of EI was 91.17 (12.33) in nurses, and the mean (SD) score of nursing care quality was 184.01 (37.41) and 202.22 (22.30) from the viewpoint of patients and nurses, respectively. There was no significant difference between the two viewpoints ($p = 0.652$). However, there was a significant correlation between the nurses' EI and quality of nursing care ($r = 1.00$, $p < 0.001$). The educational level was the strongest predictor of increase in nursing care quality from the patients' viewpoint, according to the multivariate analysis ($\beta = -0.27$, $p < 0.001$). **Conclusions:** EI positively affects the quality of nursing care and its dimensions. Therefore, it is recommended that nursing policymakers consider educational programs to strengthen the nurses' EI and enhance the quality of nursing care. Patients, similar to nurses, can be proper indicators of the quality of nursing care; accordingly, simultaneous use of these indicators is suggested.

Keywords: Emotional intelligence, nurses, patients, quality of health care

Introduction

Emotional Intelligence (EI) is a critical ability for personal and professional success. EI is characterized by self-awareness, self-management, social awareness, and relationship management.^[1] This mental skill helps the individual in a variety of personal, social, occupational, communicative, and financial domains, such as time management, decision-making, customer services, accountability, empathy, presentation skills, stress tolerance, trust, and communication management.^[2] In healthcare teams, communication plays a key role in the diagnosis, care, and treatment of patients. Therefore, recognizing and enhancing EI plays an important role in health promotion.^[3]

Acquisition of EI skills and their clinical application are needed in different disciplines of health sciences, especially nursing that involves care for

patients.^[4] Although some nurses and medical staff may not be aware of different aspects of EI, they can inadvertently acquire and apply some of these skills through experience. Nevertheless, these skills need to be strengthened and organized for increased efficiency and effectiveness. Also, development of EI by enhancing communication skills, stress tolerance, time management, and decision-making can improve the quality of care.^[5]

The Quality of Nursing Care (QoNC) refers to meeting the patient's needs through proper and safe care, empathy, appropriate communication, and respectful attitude toward the patient.^[6] Some studies suggest that there may be a significant relationship between the nurses' EI and quality of care.^[7,8] In the workplace, nurses' intraprofessional and interprofessional communication is essential. Therefore, having adequate EI skills can help nurses to better understand the emotional ambiance of their workplace.^[5]

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Elmira Khademi,
Mohammad
Abdi^{1,2}, Mohammad
Saeidi³, Shahram
Piri, Robab
Mohammadian

Department of Nursing, Maragheh Branch, Islamic Azad University, Maragheh, ¹Student of Medical Education, School of Medicine, Tehran University of Medical Sciences, Tehran, ²Department of Emergency and Critical Care, Faculty of Nursing and Midwifery, Zanjan University of Medical Sciences, Zanjan, ³Department of Anesthesiology and Critical Care, Qom University of Medical Sciences, Qom, Iran

Address for correspondence:

Mr. Mohammad Abdi,
Student of Medical Education,
School of Medicine, Tehran
University of Medical Sciences,
Tehran, Iran.
E-mail: mohammad2016@zums.
ac.ir

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In the clinical setting, nurses are expected to make critical decisions, based on the patient's emotional status. A suitable critical decision can have a remarkable influence on the patient outcomes and improve the quality of care.^[7]

The promotion of healthcare quality, which is a priority in nursing care, can increase patient satisfaction, improve care efficiency, and reduce hospital costs.^[8] Commonly, improvement of the quality of care is directly related to the patients' viewpoints.^[9] Also, patient outcomes have a great impact on the patient satisfaction and reflect an increase in QoNC.^[10] Overall, strong EI skills may increase patient satisfaction and QoNC. According to previous studies, patients with EI up to 94% can judge the quality of hospital services fairly.^[9,11]

Moreover, nurses can be proper indicators of the quality of hospital care.^[12] Although some previous studies have focused on QoNC, only a few of them have compared the viewpoints of nurses and patients or investigated the impact of EI on these viewpoints.^[13,14] Also, there are many challenges related to the quality of care and its dimensions from the viewpoints of nurses and patients. In this regard, Jamsahar *et al.* (2020) reported that the views of nurses and patients about QoNC are different in all psychosocial, physical, and communicative domains, whereas Askari *et al.* (2020) reported a significant difference in only the psychosocial dimension.^[15,16] Besides, there are challenges related to the effects of factors, such as age, gender, education, and work experience, which can affect the QoNC and EI.^[17,18] Considering the importance of QoNC and the mentioned challenges, we aimed to determine the correlation between EI and QoNC by comparing the viewpoints of nurses and patients.

Materials and Methods

This descriptive correlational study was conducted as part of a research project, approved by Maragheh University of Medical Sciences, East Azerbaijan, Iran. It was conducted using census sampling to select the nurses and convenience sampling to select the patients in Amir Alam Hospital in Tabriz, Iran, from March to June 2018. Of 150 nurses who worked in this hospital and met the inclusion criteria, 100 nurses volunteered to participate in the study.

To estimate the sample size, we used the Standard Deviation (SD) of QoNC from the patients' viewpoint ($\delta = 20$), which was reported in Miri's study.^[9] The sample size was estimated at 270 patients, according to the sample size formula ($z = 1.96$, $d = 0.12$, $\delta = 20$). Since the nurses were invited to the study from all hospital wards, we increased the sample size and also invited patients from all wards to participate in the study. We attempted to match the patients and caregivers as much as possible to reduce error and bias. Finally, out of 340 patients treated at the hospital, 300 patients met the inclusion criteria and volunteered to participate in the study.

The inclusion criteria for the nurses were having at least one year of work experience and having a bachelor's or master's degree in nursing. Moreover, the inclusion criteria for the patients were as follows: hospitalization for at least 48 hours; no history of psychiatric disorders, according to history-taking from the patients; full alertness (oriented to person, place, and time); age range of 18-70 years; and ability to read and answer the questions. On the other hand, the exclusion criteria for the patients were decreased consciousness, sudden exacerbation of the disease, cardiac or respiratory arrest, and desire to withdraw from the study. The exclusion criteria for the nurses were the occurrence of a psychological disorder (self-reported), a new crisis during the study, and desire to withdraw from the study. Finally, the study population consisted of 100 nurses and 300 patients.

The data collection tool was a three-part questionnaire. The first part included a demographic questionnaire, containing the personal and social characteristics of the patients (age, gender, marital status, level of education, clinical emergencies, history of hospitalization, and frequency of admission) and nurses (age, gender, marital status, level of education, shift work, occupational position, and work experience). The second part of the questionnaire included the Quality Patient Care Scale (QUALPACS), which was completed by the patients and nurses. The QUALPACS consists of psychosocial (28 items), physical (24 items), and communication (13 items) dimensions. The scores of this questionnaire range from 0 to 260. Scores of 0-136 are interpreted as unpleasant, scores of 137-204 are interpreted as partly unpleasant, and scores of 205-260 are interpreted as pleasant.^[19,20]

The QUALPACS has been used to assess QoNC in the United States, United Kingdom, and Nigeria.^[21] This tool is used to measure the QoNC from the viewpoints of nurses and patients. The validity of the Persian version of this questionnaire was approved in a study by Sabzianpur *et al.* (2019), and its reliability was confirmed with a Cronbach's alpha coefficient of 0.97.^[19] Moreover, in a study by Neishabory *et al.*, the validity of this questionnaire was evaluated, and its reliability was confirmed with a Cronbach's alpha coefficient of 0.80.^[21]

The third part of the questionnaire, that is, Bradberry-Greaves' EI test, consisted of 28 items, which were divided into four general EI domains: self-awareness, self-management, social awareness, and relationship management.^[22,23] The validity of this questionnaire was approved in a study by Ganji *et al.* (2006), using two methods of convergent validity and factor analysis. In their study including 540 students, Cronbach's alpha coefficient was 0.82 for males and 0.83 for females.^[23] Moreover, the validity of this questionnaire was approved in a study by Ghaderi (2015). The reliability coefficient was 0.90 for self-awareness, 0.87 for self-management, 0.80 for social

awareness, 0.78 for relationship management, and 0.84 for the total score.^[24]

The questionnaires were distributed by two members of the research team (Piri Sh. and Khademi E.) in the morning, afternoon, and night shifts among patients and nurses of each ward and collected after completion. Data analyses were carried out in SPSS Version 20 (IBM, USA) by using Kolmogorov-Smirnov test, t-test, ANOVA, Chi-square, Pearson's correlation coefficient test, and multivariate analysis.

Ethical considerations

This study was approved by the Ethics Committee of Maragheh University of Medical Sciences (Iranian ethical code: IR.MARAGHEHPHC.REC.1396.26). The study objectives and design were explained to the patients and nurses, and they were allowed to withdraw from the study at any time. All participants gave an oral consent before enrollment in the study.

Results

A total of 300 patients and 100 nurses participated in this study. According to the results of Kolmogorov-Smirnov test, the distribution of EI ($z = 0.81, p = 0.513$) and QoNC ($z = 0.79, p = 0.546$) data was normal. The mean (SD) score of EI was 91.17 (12.33) in nurses; the mean (SD) scores of all EI dimensions are shown in Table 1. The mean (SD) score of QoNC was 184.01 (37.41) from the viewpoint of patients and 202.22 (22.31) from the viewpoint of nurses. There was a significant association between some demographic characteristics of the patients (e.g., age, educational level, occupation, and emergency admission) and QoNC ($p < 0.001$) [Table 2]. No significant difference was found in the total score of QoNC from the viewpoint of patients and nurses ($p = 0.652$), although there were

significant differences in the psychosocial ($p = 0.04$) and physical ($p = 0.02$) dimensions [Table 3].

There was a significant positive correlation between the EI of nurses and QoNC from the viewpoint of nurses and patients, based on Pearson's correlation test ($r = 1.00, p < 0.001$) [Table 3]. Among the patients' demographic characteristics, educational level and occupation were the most common predictors of QoNC from the patients' viewpoint, based on the multivariate analysis ($\beta = -0.27, <0.001$). Also, gender ($\beta = -0.27, p = 0.005$) and educational level ($\beta = 0.22, p = 0.03$) were the strongest predictors of EI, based on the multivariate analysis [Table 4].

Discussion

This study aimed to determine the relationship between EI and QoNC from the viewpoints of nurses and patients. The high EI of nurses had a positive impact on the improvement of QoNC from the viewpoints of nurses and patients. Similar to the present study, Lewis *et al.* (2017) reported that EI had a positive effect on QoNC.^[25] Other studies, including the ones conducted by Nightingale *et al.* (2018) and Askari *et al.* (2020), reported that EI has a positive relationship with QoNC.^[14,16]

Overall, nurses require different communicative, psychological, emotional, decision-making, and empathy skills to provide more effective care for the patients.^[1,25] EI may positively affect the development of self-awareness, self-management, social awareness, and relationship management.^[1] According to the present study, each dimension of EI has a significant positive relationship with the patients' viewpoints about QoNC. Therefore, improvement of nurses' EI skills and the patients' viewpoints may greatly increase the QoNC.^[9] Although various positive effects have been reported in previous studies, none of these studies have investigated the effect of EI on the overall quality of care. It seems that EI has a direct impact on all aspects of QoNC (e.g., psychosocial, physical, and communicative) and enhances the nursing skills associated with these dimensions.^[14,16,25]

Moreover, the present study aimed to compare the QoNC from the viewpoints of nurses and patients. While no significant difference was found in the total score of QoNC from the viewpoints of patients and nurses, there was a significant difference in the psychosocial and physical dimensions. Although some studies have been carried out on the QoNC,^[26,27] less attention has been paid to the viewpoints of nurses and patients to assess the QoNC. On the other hand, Jamsahar *et al.* (2020) reported a significant difference between the viewpoints of nurses and patients about QoNC, which is inconsistent with the present study.^[15] Nevertheless, only the dimensions of quality of care were compared, and the overall quality outcome was not compared. Neishabory *et al.* (2011) found

Table 1: The prevalence and mean (SD) score of dimensions of emotional intelligence

Emotional Intelligence	Mean (SD)	Level	n (%)
Self-awareness	18.96 (3.29)	Weak	3 (3)
		Normal	70 (70)
		High	27 (27)
Self-management	26.02 (4.39)	Weak	40 (40)
		Normal	49 (49)
		High	11 (11)
Social-awareness	15.50 (2.59)	Weak	3 (3)
		Normal	74 (74)
		High	23 (23)
Relationship Management	30.69 (5.30)	Weak	2 (2)
		Normal	27 (27)
		High	71 (71)
Total score	91.17 (12.33)	Weak	2 (2)
		Normal	22 (22)
		High	76 (76)

Table 2: The relationship between Social-demographic characteristics of patients and nurses with QoNC*

Social-demographic characteristics of patients and QoNC*				
Patient Demographics		n (%)	QoNC* Mean (SD)	p-value
Gender	Male	145 (48.30)	185.92 (40.22)	0.065**
	Female	155 (51.7)	182.23 (34.61)	
Age	18-35	82 (26.67)	177.22 (41.80)	p<0.001***
	36-45	53(17.70)	170.23 (36.54)	
	≤46	164(55.63)	191.86 (33.56)	
Marital status	Single	99 (33)	189.27 (32.30)	0.77**
	Married	201 (67)	181.42 (39.49)	
Education level	Illiterate	146 (48.70)	193.24 (32.33)	p<0.001***
	Elementary	123 (41)	176.69 (41.02)	
	Academic	31 (10.30)	69.65 (3.78)	
Occupation	Unemployment and housekeeper	168 (56)	187.24 (35.98)	0.01***,
	Simple and technical worker	72 (24)	175.29 (38.20)	
	Student	25 (8.60)	199.16 (30.61)	
	Employment	34 (11.4)	160.94 (43.21)	
Emergency admission	Yes	189 (63)	165.71 (38.62)	p<0.001**
	No	111 (37)	191.13 (35.24)	
History of hospitalization	Yes	246 (82)	184.03 (37.13)	0.42**
	No	54 (18)	183.89 (40.88)	
Shift upon admission	Morning	115 (38.30)	185.69 (37.99)	0.809***,
	Evening	126 (42)	183.42 (34.33)	
	Night	59 (19.70)	182.03 (42.76)	
Social-demographic characteristics of nurses and QoNC*				
Nurse Demographics		n (%)	QoNC* Mean (SD)	p-value
Gender	Female	73 (73)	198 (25.15)	0.286**
	Male	27 (27)	203.41 (21.47)	
Age	18-35	37 (37)	203.68 (24.27)	0.257***
	36-45	56 (56)	202.17 (204.88)	
	≤46	7 (7)	184.50 (7.50)	
Marital status	Single	19 (81)	207.06 (28.34)	0.137***
	Married	81 (19)	199.94 (18.64)	
Education level	BSc****	93 (93)	199.69 (22.16)	0.02*
	MSc*****	7 (7)	208.75 (23.66)	
Job experienced (year)	1-10	32 (32)	202.57 (23.35)	0.842***
	11-19	58 (58)	202.65 (19.97)	
	≤20	10 (10)	197.75 (17.92)	
Type of employment	Contract to workforce	38 (38)	204.84 (19.39)	0.46**
	Employment	62 (62)	200.61 (19.39)	
Types of shift	Fixed	22 (22)	201.29 (24.19)	0.39**
	Rotational	78 (78)	199.89 (15.31)	

*Quality of Nursing Care, **Chi-square, ***ANOVA, ****Bachelor of Science in Nursing, *****Master of Science in Nursing

a significant difference between the viewpoints of patients and nurses about QoNC, which is not consistent with the present study.^[21] Despite the differences in the viewpoints of nurses and patients about the dimensions of QoNC, both of the mentioned studies revealed that the overall QoNC is satisfactory, which is consistent with the present study.

Nurses are important members of healthcare teams, and attention to the professional aspect of QoNC is essential.^[5] On the other hand, patients as the recipients of care services are also important in QoNC.^[10] Although in the present study, there were differences in many dimensions of nursing

care from the nurses and patients' viewpoints, there was no significant difference in terms of the pleasant or unpleasant delivery of nursing services. It seems that the perceptions of nurses and patients about the disease, social differences, communication, and physical problems have led to differences in different dimensions of QoNC,^[11-14] however, the overall opinion about the quality of care is similar. It can be inferred that the views of nurses and patients differ regarding the quality-of-care services, while there is no significant difference in the quality-of-care outcomes; therefore, the patients' viewpoints can be as important as the staff's viewpoints about QoNC.^[12] It is recommended to consider

Table 3: Relationship between emotional intelligence and quality of nursing care based on nurses 'and patients' viewpoints

Comparison of QoNC from the viewpoint of patients and nurses				
Quality of nursing care dimensions		Nurse (n=100) n (%)	Patient (n=300) n (%)	p-value of t-test
Psychosocial	Unpleasant	0 (0)	13 (4.30)	0.04
	Partly Unpleasant	2 (2)	52 (17.30)	
	Pleasant	98 (98)	235 (78.30)	
	Mean (SD)	88.39 (1.00)	79.69 (17.43)	
Physical	Unpleasant	2 (2)	39 (13)	0.02
	Partly Unpleasant	8 (8)	128 (42.70)	
	Pleasant	90 (90)	133 (44.30)	
	Mean (SD)	81.77 (1.00)	65.88 (15.14)	
Communication	Unpleasant	84 (84)	226 (75.30)	0.764
	Partly Unpleasant	16 (16)	74 (24.70)	
	Pleasant	0 (0)	0 (0)	
	Mean (SD)	39.21 (0.56)	38.44 (8.56)	
Total	Unpleasant	2 (2)	0 (0)	0.652
	Partly Unpleasant	47 (47)	1 (0.30)	
	Pleasant	51 (51)	299 (99.70)	
	Mean (SD)	202.22 (22.31)	184.01 (37.41)	

The correlation between EI * and QoNC**				
Emotional Intelligence	QoNC from nurses Viewpoints***		QoNC from patients Viewpoints***	
	r	p	r	p
Self-awareness	1.00,	<0.001	1.00,	<0.001
Self-management	0.70,	0.02	0.68,	0.03
Social-awareness	0.88,	0.001	0.60,	0.04
Relationship management	1.00,	<0.001	1.00,	<0.001
Total score	1.00,	<0.001	1.00,	<0.001

*Emotional Intelligence **Quality of Nursing Care ***Pearson Correlation

both of these indicators to evaluate QoNC and survey the views of both professional and care recipients about QoNC.

It seems that as time passes and the patient is stabilized (as a health indicator), the interactions of the healthcare system with the patients increase.^[14,15] A new role is developed for the patient as the sole recipient of care, which may present new challenges for the healthcare team. These challenges may include the role of patient in care evaluation, the concept of care quality from the patient's view, and selection of appropriate evaluation tools by the medical team.^[1,8,11,16]

To optimize the EI skills, the healthcare team needs to understand different characteristics of its members and the patients. It is also possible to enhance QoNC through effective interactions. In the present study, there was no significant difference between the nurses' demographic characteristics and QoNC, except for the educational level. However, there was a significant association between QoNC and some demographic characteristics of the patients, such as age, educational level, occupation, and emergency admission. In this regard, Teunissen *et al.* (2016) showed that perception of QoNC in women is lower than men, which is not in line with the present findings.^[28]

Unlike the present study, Lotfi *et al.* (2019) reported that there was a significant relationship between the QoNC

and gender; in other words, the quality of care provided by female nurses was higher than the quality of care provided by male nurses.^[29] The discrepancy between these studies can be attributed to the patients' needs and situation at the Point of Care (POC). For example, men have better decision-making skills and physical abilities in critical situations, while women are more capable of communication. Differences in the patients' conditions, departments, and environmental challenges may be also associated with different expectations from nurses at POC. Therefore, attention to the capabilities of men and women at POC can determine the QoNC.^[15,28,29]

Unlike the present study, Abdul Rahman *et al.* (2015) reported that the nurses' higher educational level was not significantly associated with the QoNC. In their survey, nurses from different countries and educational systems were included.^[30] Conversely, Grondahl *et al.* (2019) showed that there was a significant relationship between QoNC and higher education.^[31] Other factors, such as culture, university education, and geography, can be significant in this comparison and cause significant differences, even in different regions of a country.

One of the limitations of this study was its large scope for nurses, which made them exhausted to complete the questionnaires. Therefore, the research team was required

Table 4: Association between demographic characteristics with QoNC* from patients and nurses viewpoint and EI based on multivariate analysis**

Demographic characteristics	S.E	β	p-value
QoNC from patients viewpoint			
Gender	4.54	-0.04	0.473
Age	1.64	0.05	0.442
Marital status	2.27	0.09	0.084
Education level	2.22	-0.27	0.000
Occupation	0.98	0.14	0.022
Emergency admission	4.40	-0.07	0.206
History of hospitalization	7.66	-0.02	0.714
Shift upon admission	2.83	-0.03	0.536
QoNC from nurses viewpoint			
Gender	5.86	0.13	0.211
Age	6.70	-0.24	0.156
Marital status	3.66	0.14	0.181
Education level	6.65	-0.06	0.587
Work experience (year)	7.17	0.02	0.910
Type of employment	2.37	0.05	0.697
Shift working	2.55	-0.14	0.313
EI**			
Gender	2.65	-0.27	0.005
Age	4.00	0.20	0.291
Marital status	3.11	-0.10	0.388
Education level	4.00	0.22	0.030
Job experienced (year)	3.84	0.10	0.607
Type of employment	1.40	-0.13	0.338
Shift working	1.09	0.06	0.501

*Quality of Nursing Care, **Emotional Intelligence, ***Standard Error

to stay in the nursing station until the nursing staff had free time to complete the questionnaires patiently. Also, this study was only performed in one hospital in Tabriz, Iran.

Conclusion

Based on the present findings, EI had direct effects on all dimensions of QoNC, including self-awareness, self-management, social awareness, and relationship management. Therefore, high levels of EI in the healthcare team can lead to satisfactory QoNC for the patients. It is recommended that clinical and academic nursing policymakers consider EI in QoNC assessments and improve EI with educational programs. Also, patients, similar to nurses, are proper indicators for evaluating the QoNC; therefore, simultaneous use of these indicators is suggested.

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Conflicts of interest

Nothing to declare.

References

- Hadiwijaya H, Hutasoit G. Effect of emotional intelligence on student learning achievement. *Guidena* 2017;7:29-39.
- Celik GO. The relationship between patient satisfaction and emotional intelligence skills of nurses working in surgical clinics. *Patient Prefer Adherence* 2017;11:1363-8.
- Di Fabio A, Kenny ME. Promoting well-being: The contribution of emotional intelligence. *Front Psychol* 2016;7:1182.
- Drigas AS, Papoutsi C. A new layered model on emotional intelligence. *Behav Sci (Basel)* 2018;8:45.
- Snowden A, Stenhouse R, Young J, Carver H, Carver F, Brown N. The relationship between emotional intelligence, previous caring experience and mindfulness in student nurses and midwives: A cross sectional analysis. *Nurse Educ Today* 2015;35:152-8.
- Epstein RM, Duberstein PR, Fenton JJ, Fiscella K, Hoerger M, Tancredi DJ, et al. Effect of a patient-centered communication intervention on oncologist-patient communication, quality of life, and health care utilization in advanced cancer: The VOICE randomized clinical trial. *JAMA Oncol* 2017;3:92-100.
- Shahnavazi M, Parsa-Yekta Z, Yekaninejad MS, Amaniyan S, Griffiths P, Vaismoradi M. The effect of the emotional intelligence education programme on quality of life in haemodialysis patients. *Appl Nurs Res* 2018;39:18-25.
- Miri K, Parsa P, Shirdelzadeh S, Keshavarz A. The relationship between nurses' spiritual elligence and quality of nursing care based on nurses' & patients' viewpoints. *J Urmia Nurs Midwifery Fac* 2015;13:518-24. [Persian]
- Woo BFY, Lee JXY, Tam WWS. The impact of the advanced practice nursing role on quality of care, clinical outcomes, patient satisfaction, and cost in the emergency and critical care settings: A systematic review. *Hum Resour Health* 2017;15:63.
- Jang RJ, Kang YS, Kim YM. The relationships in emotional intelligence, job satisfaction, and quality of nursing service in hospital nurses. *J Korea Acad Ind Coop Soc* 2016;17:326-37.
- Fatima T, Alam Malik Sh, Shabir A. Hospital healthcare service quality, patient satisfaction and loyalty. *IJQRN* 2018;35:1195-214.
- Pearson ML, Needleman J, Beckman R, Han B. Facilitating nurses' engagement in hospital quality improvement: The new jersey hospital association's implementation of transforming care at the bedside. *J Healthc Qual* 2016;38:e64-75.
- Najafpour J, Keshmiri F, Rahimi S, Bigdeli Z, Niloofar P, Homauni A. Effect of emotional intelligence on the quality of nursing care from the perspectives of patients in educational hospitals. *J Patient Saf Qual Improv* 2020;8:37-43.
- Nightingale S, Spiby H, Sheen K, Slade P. The impact of emotional intelligence in health care professionals on caring behaviour towards patients in clinical and long-term care settings: Findings from an integrative review. *Int J Nurs Stud* 2018;80:106-17.
- Jamsahar M, Khaki S, Esmeilpour Zanjani S, Mashouf S. Comparison of quality of nursing cares from the perspective of nurses and patients. *Sci J Nurs Midwifery Paramed Fac* 2020;5:72-83. [Persian]
- Askari M, jafariany S, ghafouri O, bazr M, dehnolian A.

- Comparison of nurses' and patients' viewpoints on the quality of nursing care. *J Neyshabur Univ Med Sci* 2020;8:38-45. [Persian]
17. Zhu Y, Liu C, Guo B, Zhao L, Lou F. The impact of emotional intelligence on work engagement of registered nurses: The mediating role of organisational justice. *J Clin Nurs* 2015;24:2115-24.
 18. Snowden A, Stenhouse R, Duers L, Marshall S, Carver F, Brown N, *et al.* The relationship between emotional intelligence, previous caring experience and successful completion of a pre-registration nursing/midwifery degree. *J Adv Nurs* 2018;74:433-42.
 19. Sabzianpur Z, Nuri S. Effect of spiritual intelligence on quality of nursing care of educational and treatment hospitals in Hamadan. *Avicenna J Nurs Midwifery Care* 2019;27:18-24. [Persian]
 20. Varedi Kolahi M, Ziae Totonchi Bagheri M, Bakhshandeh H, Ghanei Gheshlagh R, Mohammadnejad E. Evaluation of factors affecting quality of nursing cares for dying patients in ICUs. *Indian J Forensic Med Toxicol* 2020;14:275-80.
 21. Neishabory M, Raeisdana N, Ghorbani R, Sadeghi T. Nurses' and patients' viewpoints regarding quality of nursing care in the teaching hospitals of Semnan University of Medical Sciences. *Koomesh* 2011;12:134-43. [Persian]
 22. Bagheri Nesami MB, Goudarzian AH, Zarei H, Esameili P, Dehghan Pour M, Mirani H. The relationship between emotional intelligence with religious coping and general health of students. *Mater Sociomed* 2015;27:412-6.
 23. Ganji HMM, Sabt M. Bradberry-greaves, emotional intelligence test: Preliminary norming-process. *J Appl Psychol* 2006;1:23-35. [Persian]
 24. Ghaderi M, Shamsi A. The correlation between emotional intelligence and mental health among students of Jiroft city. *J Health Promot Manag (JHPM)* 2015;5:62-72. [Persian]
 25. Lewis GM, Neville C, Ashkanasy NM. Emotional intelligence and affective events in nurse education: A narrative review. *Nurse Educ Today* 2017;53:34-40.
 26. Karaca A, Durna Z. Patient satisfaction with the quality of nursing care. *Nurs Open* 2019;6:535-45.
 27. Weldetsadik AY, Gishu T, Tekleab AM, Mekonnen Asfaw Y, Girma Legesse T, Demas T. Quality of nursing care and nurses' working environment in Ethiopia: Nurses' and physicians' perception. *Int J Afr Nurs Sci* 2019;10:131-5.
 28. Teunissen TAM, Rotink ME, Lagro-Janssen ALM. Gender differences in quality of care experiences during hospital stay: A contribution to patient-centered healthcare for both men and women. *Patient Educ Couns* 2016;99:631-7.
 29. Lotfi M, Zamanzadeh V, Valizadeh L, Khajehgoodari M. Assessment of nurse-patient communication and patient satisfaction from nursing care. *Nurs Open* 2019;26:1189-96.
 30. Abdul Rahman H, Jarrar M, Don MS. Nurse level of education, quality of care and patient safety in the medical and surgical wards in Malaysian private hospitals: A cross-sectional study. *Glob J Health Sci* 2015;7:331-7.
 31. Grondahl W, Muurinen H, Katajisto J, Suhonen R, Leino-Kilpi H. Perceived quality of nursing care and patient education: A cross-sectional study of hospitalised surgical patients in Finland. *BMJ Open* 2019;9:e023108.